(3 marks) a one-paragraph summary of the class project;

(3 marks) surveys of the problems and methods;

(4 marks) a big picture on the organization of your code;

(10 marks) final versions of your code in the Appendix;

(4 marks) report your final results;

(3 marks) discuss the physics of these results; and

(3 marks) list your references.

**Summary**

The Lorenz Equations provide a simple and yet significant area of study as it provides scientists a chaotic dynamical outlook of a system. First derived by Edward Lorenz in 1963, the three-dimensional system came from a simplified model of convection system of the atmosphere. The trajectories of the system also converge into stable cycles which are now called strange attractors relating to fractals; understanding these natural phenomenon can unlock some of the mysteries the universe has to offer.

We will be investigating different parameters of the Lorenz Equation to produce some of the most fascinating graphical outcomes of the trajectory of this 3 dimensional ODE. We will be applying what we learned in class using Runge-Kutta method and many more.

**Survey**

**Code explanation**

**Results**

**Discussion**

**References**

**Appendix**